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Foreign Direct Investment: Good Cholesterol?

by

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The New Wave of Capital Inflows: Sea Change or Just Another Tide?

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Introduction

You have heard it all before. Capital flows are not all the same (Frankel and Rose, 1996; Kaminsky, Lizondo and Reinhart, 1998). Just as with cholesterol, there is the good kind and the bad kind. The good kind – foreign direct investment (FDI) – brings with it technology, managerial skills and market access and thus accelerates growth and development (Aitken, Hanson, and Harrison, 1997; Blomstrom and Kokko, 1997; Borensztein, De Gregorio, and Lee, 1998). Furthermore, it is bolted down and cannot leave so easily at the first sign of trouble. It flows in because it is attracted by the long-term prospects of a country and the confidence that its policies and institutions inspire. The bad cholesterol is represented by debt, especially of the short-term variety. It is driven by speculative considerations based on interest rate differentials and exchange rate expectations, not on long-term considerations. Its movement is often the result of moral hazard distortions such as implicit exchange rate guarantees or the willingness of governments to bailout the banking system. It is the first to run for the exits in times of trouble and is responsible for the boom-bust cycles of the 1990s (Chuhan, Perez-Quiros, and Popper, 1996; Chuhan, Claessens and Mamingi, 1998; Claessens, Dooley, and Warner, 1995; Dooley, Claessens and Warner, 1995; Sarno and Taylor, 1999).

This analysis casts current Latin American events in a very favorable light: the flow of capital to Latin America is becoming increasingly dominated by FDI. In fact, while private capital inflows (i.e. total cholesterol) declined to US\$ 68.6 billion in 1999, off 36 percent from a peak of US\$107 billion in 1997 (see Figure 1), FDI—the good cholesterol—has been exploding. In fact, from less than US\$ 10 billion in the early 90's (see Figure 2), and US\$ 35.8 billion (36.8 percent of private flows) as recently as 1996, FDI reached US\$ 66.5 billion in 1999, just under 97 percent of net private capital inflows in 1999 (see Figure 1).

How should we interpret the upsurge in FDI? Is it the consequence of a better policy environment? Is it a sign of confidence in the growth prospects and policies of Latin America? Should countries try to promote FDI while discouraging other types of flows?

This paper studies the proposition that capital inflows tend to take the form of FDI—i.e. the share of FDI in total liabilities tends to be higher—in countries that are safer, more promising and with better institutions and policies. It finds that this view is patently wrong since it stands the historical record on its head. It then uses alternative theories to make sense of the facts. It begins by studying the determinants of the size and composition of the flows of private capital across countries. It finds that while capital flows tend to go to countries that are safer and have better institutions and financial markets, the share of FDI in total flows is not an indication of good health. On the contrary, countries that are riskier, less financially developed and have weaker institutions tend to attract less capital but more of it in the form of FDI. Hence, interpreting the rising share of FDI, as a sign of good health is unwarranted.¹ This is even more so, given that FDI's recent rise has taken place while total private capital inflows have fallen.

After establishing the stylized facts we move on to clarify some of the misunderstandings that emerge from the mere definition of foreign direct investment. In particular, FDI is not the foreign firm itself but only one of the ways in which it finances itself. We will argue, following Coase (1937) and Williamson (1985), that firms are in themselves substitutes for the market and will tend to extend their borders wherever they encounter missing or inefficient markets. In this context, foreign companies dealing with such markets will want to have hierarchical control (i.e. establish firms), in those environments where transaction costs (i.e. the costs of relying on the market) are high. Hence, in countries with inefficient financial markets, inadequate contract enforcement and poor protection of intellectual property, foreign companies will want to operate directly instead of relying on local suppliers, franchises or other arrangements. Secondly, the choice between debt, portfolio equity and FDI will reflect those elements that the theory of corporate finance has pointed out: the higher the risk, the greater the reliance on equity; hence

¹ A companion paper addresses the issue of the relationship between the composition of the capital account and the risk of crises. It studies among other things the proposition that FDI is better because it is “bolted down.”

FDI.

We will conclude with some policy implications. The first is that the share of FDI in total capital inflows is not a measure of anything good happening in the economy. We will argue that the fact that the recent rise in the ratio of FDI to total capital inflows started after the Tequila Crisis and accelerated during the East Asian and Russian crises is no coincidence. It can be explained by the fact that lower growth prospects and higher risks lead companies to prefer more equity and less debt in the composition of their capital. Also, poorly functioning debt and equity markets can make FDI a more efficient way to access capital. In all of these cases, the fact that the share of FDI in capital inflows is rising is not bad in itself, but is instead an optimal response to a deteriorating environment. Hence, a high share of FDI in capital inflows is not a sign of good health, as evidenced by the industrial countries where it is barely 12 percent. Consequently, policies directed at expanding that share are unwarranted. Instead, countries should concentrate on improving the environment for investment and the functioning of markets. They are likely to be rewarded with increasingly efficient overall investment as well as with more capital inflows. However, under those conditions the share of FDI in those inflows may decline: that could very well be a sign of good health!

The paper starts by presenting the empirical evidence on the size and composition of capital inflows (Section 2). In section 3 we run a set of regressions to see how much of the cross-country experience can be explained by variables such as the quality of institutions, the level of risk and development, among others. In sections 4 to 6, we review different theoretical approaches to see how they may help make sense of the empirical findings. We derive our conclusions in section 7.

Size and Composition of Private Capital Flows: Some Stylized Facts

Does it not make sense to see FDI as a more serious, long-term commitment to a country that is more demanding in terms of institutions, prospects and policies? Should one not expect FDI to

be a preferred type of capital? What is wrong with the good cholesterol—bad cholesterol metaphor?

To analyze this question we looked at three concepts. First, we considered gross private capital inflows as a share of GDP, i.e. how large is the stock of liabilities to private foreign investors relative to GDP. Second, we looked at the share of FDI in those liabilities, i.e. the share of good cholesterol. Finally, we examined the ratio of FDI to GDP. Obviously, the last ratio is the product of the first two.² We can thus decompose the share of FDI to GDP as a consequence of a *volume* effect, reflected in the total flow of private or commercial capital, and a *composition* effect, i.e. what proportion of it is FDI or “good cholesterol.” Figure 3 uses the *stocks* of liabilities for 1997, while Figure 4 uses the average *flows* of capital for the period 1996-98.³ The two sets of graphs are quite similar, indicating that what has been true historically, as reflected in accumulated stocks, is also true for the recent past.

Figures 3a and 4a show that gross private liabilities as a share of GDP are by far highest in industrial countries, with flows reaching almost 10 percent of GDP. Then come in close proximity to each other three middle-income regions: Latin America, East Asia⁴, and Eastern Europe, averaging around 3 percent of GDP. The lowest levels are found in the low-income regions of Asia and Africa, with flows that are between 1 and 2 percent of GDP.

Figures 3b and 4b show the proportion of private flows that take the form of FDI. Here the story is reversed. The industrial countries show the lowest share of good cholesterol, averaging only about 12 percent of total liabilities. In figure 3b we find that the stock of FDI represents around 30 percent of the total stock of private external liabilities in the three middle income regions of Latin America, East Asia and Eastern Europe, while the share is highest in the poor regions of Asia and Africa, where it exceeds 50 percent. This pattern varies somewhat from recent experience, as shown in Figure 4b. There, the ratio in Asia has amply surpassed

² The relationship is straightforward:

$$\text{FDI/GDP} = (\text{Total Private Capital/GDP})(\text{FDI/Total Private Capital})$$

³ Data on 1999 was not available for all regions of the world.

⁴ For the purpose of this paper we define East Asia as Korea, Indonesia, Thailand, Malaysia, The Philippines and Singapore.

that in Africa while the ratio in Latin America has become much higher than that observed in East Asia and Eastern Europe.

Figure 3c shows the accumulated stock of FDI as a share of GDP. Latin America and the industrial countries share a similar ratio of slightly over 7 percent of GDP, followed by East Asia with 6.3 percent. Eastern Europe falls in a much more distant fourth place, with stocks of FDI as a share of GDP similar to those of Africa, under 4 percent of GDP, while the lowest ratio is observed in Asia, where it is below 3 percent of GDP. Figure 4c shows that the recent experience has been different. Latin America is by far the region with the highest ratio of FDI to GDP, reaching 1.6 percent of GDP. The industrial countries, East Asia and Eastern Europe received a similar but much lower proportion of FDI, averaging some 1.2 percent of GDP. Asia and Africa have both received slightly less than 1 percent of GDP in FDI flows during 1996-98.

Hence, we find that total capital flows tend to increase with the level of development. However, the share of those flows that take the form of FDI tends to decline with the level of development. Said differently, FDI seems to be an inferior good in the sense that its share tends to fall with income. Finally, the share of FDI to GDP is a consequence of these two previous effects. It is very high in industrial countries because it is a small share of a very large total volume of capital. It has been unusually high in Latin America recently, not because total flows have been high, but because the share of those flows that take the form of FDI has been unusually high both historical speaking and in relation to other middle income regions such as Eastern Europe and East Asia. Finally, in Africa and Asia the ratio of FDI to GDP is low because low volumes of total capital are not compensated by very high shares of FDI in the mix.

This is a first piece of evidence that there must be something wrong with the conventional wisdom. The share of good cholesterol is not highest in the most prosperous regions, but quite the contrary. What the conventional wisdom attributes to FDI seems to be true of total capital. It is total capital that appears to go up with economic development while the share of FDI declines.

The following three sections delve into an empirical investigation of these three propositions and find them either patently wrong or at least largely unsubstantiated. We then explore theoretical approaches that can make sense of the historical experience.

What Determines the Size and Composition of Capital Flows?

What factors are associated with the size and composition of capital flows? What is the role of the level of development, openness, stability, and financial and institutional development on the size and composition of capital inflows. What factors are associated with high proportions of good cholesterol?

To explore this question we compiled a data set described in Annex 1 and used it to run a set of regressions. These are presented in Tables 1 to 3, which present, respectively, equations for the total volume of capital as a share of GDP, the composition of FDI in total capital inflows, and the share of FDI in GDP. The first parts of all tables show the results for the simple regression using as independent variable only the concept shown. This serves to identify the overall empirical relationship between the two variables. The second part of the tables shows the results of each explanatory variable when we control for the level of income per capita, the size of the economy (total GDP) and the level of openness (the ratio of exports to GDP). These regressions examine the effect of each variable when we keep the control variables constant. We present only the regressions for the determinants of the average flows for 1996-98. Similar results are obtained by using the data on stocks shown in Figure 3.

The Effect of the Level of Income

As suggested by Figures 3 and 4, *the total volume of capital flows is strongly and positively related to per capita income*. This relationship is quite robust and as shown in the second part of Table 1 is still significant when we include other determinants such as the overall size and openness of the economy.

By contrast, *the share of capital inflows that takes the form of FDI is strongly negatively related to income*, a relationship that also remains significant when other control variables are included. The share of FDI in GDP, which is the product of the previous two ratios, is positively related to income, *but the statistical significance of this relationship is not robust to the inclusion of other control variables*.

We conclude that capital flows tend to increase with the level of development but the share of FDI tends to decline. The net effect of both factors on the share of FDI in GDP is ambiguous.

Is Big Better? The Effect of Economic Size

Does capital tend to flow to larger economies? Does a bigger domestic market attract FDI? Are small countries at a disadvantage?

To explore these issues we use as a measure of size the log of GDP in dollars at current prices. We find a positive correlation between the total size of capital flows and size, but this relationship is not robust, and in fact changes sign when we include income per capita. The implication is that *for two economies with similar levels of development, the bigger economy does not receive larger flows.*

The FDI composition of the flows is negatively related to economic size and the relationship remains negative, although not statistically significant when the other control variables are included. Hence, *there is no evidence that larger countries attract a proportionally larger share of FDI in total flows. The share of FDI in GDP $\frac{3}{4}$ the product of the two previous ratios $\frac{3}{4}$ is negatively and not significantly associated with size. Hence, there is no evidence that capital favors larger economies.*

The Effect of Openness

Is capital attracted to more open economies? Does FDI flow to countries that are more open? To answer this question we studied the relationship of the share of exports in GDP with the volume and composition of capital inflows.

We find that *the total volume of capital flows is positively and strongly related to openness.* More open economies tend to attract proportionally more foreign capital. However, the same is not true for the FDI-composition of capital: openness is negatively related with the share of FDI, although this relationship is not robust to the inclusion of income per capita and

size. Hence, *the share of FDI in capital flows does not increase in economies that are more open.*

*The ratio of FDI to GDP is positively and robustly associated with openness, but we conclude that it is only because of the effect of openness on the total size of capital inflows and not because it affects the share of FDI in the composition. Openness increases all forms of cholesterol; it does not skew the composition towards FDI.*⁵

Does FDI Flow to Safer, More Stable Countries?

Does an environment of economic stability attract FDI? To analyze this question we ran regressions of the size and composition of capital inflows on the volatility of GDP growth over the previous decade and on a measure of country risk. We find there is a strongly negative and statistically significant relationship between country risk and total capital flows. *Riskier countries get less capital.* The relationship remains negative but loses significance when we introduce other controls. There is also a weak negative relationship between volatility and the volume of capital flows, a relationship that is consistently negative but not statistically significant.

By contrast, *there is a positive and statistically significant relation between country risk and the share of FDI in capital inflows: riskier countries tend to get more of their flows in the form of FDI.* The link between volatility and the FDI composition of flows is also positive and both remain positive but lose their statistical significance when other controls are included.

As a consequence of these two factors, there is a positive but not statistically significant relationship between volatility and the ratio of FDI to GDP. However, *there is a negative relationship between country risk and the share of FDI in GDP.* It is significant and maintains its sign, but does not remain statistically significant when we introduce the control variables. We conclude that *it is not true that capital flows tend to take the form of FDI in more stable economies. While capital tends to shun volatile environments, its composition tends to become more FDI-intensive when volatility is greater.*

⁵ Alternatively, one could interpret the relationship as indicating that countries that attract a larger share of

The Effect of Natural Resources

Is capital attracted by the opportunity to exploit natural resources? To study this question we looked at the relationship between our variables of size and composition of capital flows with the World Bank data on subsoil natural wealth. We find a negative and statistically not significant relationship between the total volume of capital flows and subsoil wealth. However, there is a positive, statistically significant and robust relationship between subsoil wealth and the share of FDI in capital flows. As a consequence, the share of FDI in GDP is associated with subsoil wealth in a positive but not statistically significant manner. We conclude that *natural resources are no magnet for capital, but they tend to strongly shift the composition in favor of FDI.*

Does Distance Matter?

Is being far away a problem? To study this question we looked at the distance of a country to major world markets. We find that distance is negatively and significantly related to total capital flows, although the relationship keeps its sign but loses its statistical significance when other control variables are introduced.⁶ However, the share of FDI in capital inflows is positively affected by distance in a statistically significant and relatively robust manner. As a consequence, the ratio of FDI to GDP seems to go up with distance.

We conclude that proximity may be good for total capital flows, but it does not favor good cholesterol. *The share of FDI goes up with distance.*

Does Financial Development Matter?

Greater financial development as measured by the share of private credit to GDP is positively

FDI in total flows do not export more.

⁶ Sachs and Warner (1995) and IDB (2000) find that the level of development is negatively and strongly affected by distance.

related to capital flows but negatively related to the share of FDI in those flows. The relationship maintains its sign but is significantly weakened by the introduction of other control variables, especially income per capita. The net effect of these two factors on the share of FDI in GDP is positive and strong, but not statistically significant when other controls are included in the regression.

We conclude that *financial development is positively associated with the volume of capital, but does not shift its composition in favor of FDI.*

Does Institutional Quality Matter?

Is FDI attracted by the quality of a country's institutions? To analyze this question we used two sets of internationally comparable indexes of institutional quality. First, we used Dani Kaufman's 6 indexes of government quality (regulatory burden, accountability, government effectiveness, graft, rule of law). We also constructed a single overall index of government quality as the principal component of the 6 individual measures. Second, we used the La Porta et al. (1997, 1998a, 1998b) indexes of creditor rights and shareholder rights.

We find that Kaufman's indexes of institutional quality are positively and strongly correlated with the total volume of capital flows. This relationship remains positive but not statistically significant after the inclusion of the control variables, especially income per capita. The only index that remains significant is the measure of regulatory burden. IDB (2000) finds that Kaufmann's indexes are strongly correlated with measures of the level of development such as income per capita. Hence, one interpretation of the results is that institutions matter through their effect on the level of development, but not directly. If a country at a given level of development improved its institutions it would not get much more capital. The La Porta et al. index of creditor rights does not show any consistent relationship with the volume of capital flows, but the index of shareholder rights does have a positive and quite robust relationship with the overall volume of capital flows.

By contrast, *the FDI share in capital flows is strongly and negatively associated*

with Kaufman's measures of institutional development and with La Porta's measure of shareholders' rights. After the inclusion of the control variables, this relationship remains negative for 6 of the 9 indexes, but not in a statistically significant manner.

As a consequence of these two effects, the share of FDI in GDP is positively associated with institutional development as shown by the positive and statistically significant relationship in 7 out of the 9 indexes used. The relation remains positive for 7 of the 9 indexes and statistically significant for 5 indexes, especially regulatory burden, government effectiveness and shareholder rights.

We conclude that *institutions positively affect the volume of capital flows but do not skew the composition in favor of FDI.* Countries with better institutions do get more FDI, but they also get more of other kinds of capital.

Some Preliminary Conclusions

Capital flows tend to go to countries that are more developed, more open, more stable, financially more advanced and with better institutions. However, these factors tend to reduce the share of FDI in capital flows. Hence, a larger share of FDI in capital flows is typical of countries that are poorer, more closed, riskier, more volatile, more distant, less financially developed, with weaker institutions and with more natural resources.

How can we account for these stylized facts? What is the logic behind these findings? The next three sections explore potential explanations.

What is FDI? Some Accounting Gimmicks

Much of the confusion about FDI emerges from misunderstandings about what is measured as FDI. FDI is defined as the increase in the equity position of a non-resident owner who holds

more than 10 percent of the shares of the firm. It also includes the loans received by the local company from the parent foreign owner.⁷

A firm is a set of assets that are “owned” (i.e. financed) by creditors and shareholders, where the former have a senior claim over the resources and revenues of the firm and the equity owners hold the residual claims and have greater influence over management. FDI is not the firm and its assets. Instead, it is just one of the sources of financing for the firm. This distinction is important because many of the benefits attributed to FDI are really generated by the firm, not by the way it finances itself. For example, if a foreign-owned company brings in new technology, a better management system or access to new export markets, it is the firm that brings it, not FDI. FDI is just one way in which such a firm finances itself. If the firm decides to finance itself mainly by borrowing domestically, all the above mentioned improvements would take place, but it would not be registered as FDI. If by borrowing domestically it generates incentives for banks to borrow internationally in order to supply the increased demand for credit, then the firm would have caused an increase in external borrowing by banks, not FDI.

If the foreign owner buys out the equity position of a domestic owner, that is considered FDI, even though there are no new machines in the country, just a change of ownership. If the old owner buys an internationally diversified portfolio with the money he received from the sale of the company then what came in as FDI leaves as other forms of capital outflow and is not available to pay for any new imports. This is one way in which FDI is not bolted down.

Also, if the foreign owner does a leveraged buyout by borrowing domestically, the loan would be registered as an outflow of capital (a loan to a foreign agent by a domestic bank), while the buyout would be registered as FDI. In this case, FDI is not financing the current account. It is just the “return” of money that only figuratively went out.⁸

Consider a healthy company with good growth prospects that normally reinvests all its profits and borrows abroad to fund part of its expansion plans. Suddenly, a foreign company acquires the domestic firm, maybe because the old owner wants to retire. After the purchase,

⁷ In fact, about 20 percent of FDI flows take the form of loans from the parent company. The motivation for and implications of this fact will be discussed below.

⁸ The same would happen to the accounting of a domestic bank loan to a foreign owned firm that is

the company is run just the same, with the same reinvestment policy and the same borrowing plan. This operation will lead to a sudden jump in FDI in the year of the acquisition. After that, the current account deficit of the country will increase by an amount equivalent to the accrued profits of the firm. But since these are reinvested it would be registered as an equivalent inflow of FDI every year. Hence, there would be a long run increase in FDI, but not an increase in the real investment of the economy, only a change in ownership.

To make sense of FDI it is important to understand that there is no agent called FDI. FDI is just an account. A firm has many accounts: it has equity, domestic and foreign assets and debts, which can also be either short or long-term. It is the firm that makes decisions, not the accounts. FDI is not bolted down, machines are. If a foreigner buys a machine and gives it as a capital contribution (FDI) to a local company, the machine may be bolted down. But the company's treasurer can use the machine as collateral to get a local bank loan and take money out of the country. Hence, a firm may be doing one thing with its assets and something quite different with the way it finances them. Money may be coming in through one account and leaving through another. This means that checking whether FDI is more or less stable than other flows of capital does not help determine whether it makes the overall capital account more stable. The foreign company's treasurer may be hedging the firm's FDI exposure by borrowing domestically and taking out short-term capital.

This discussion helps explain why a significant part of FDI is documented as a loan from the parent company.⁹ Part of the answer has to do with tax considerations, since interest and dividends are often not treated the same by the tax code. But also, dividends and stock repurchases are awkward ways to hedge risks. They are typically decisions of the shareholders or at least of the executive board and require the presentation of the company's financial results, something that happens at most quarterly. Profits have to be assessed by outside auditors and they involve tax liabilities. Therefore, dividends cannot be determined overnight. By contrast, the treasurer can use his liquid assets or take a local loan and repay the parent company much more

incorporated abroad instead of through a local subsidiary.

⁹ It makes sense to treat the loan as an equity investment because it is in principle junior to all other debt obligations of the firm.

swiftly. So documenting FDI as a loan from the parent company makes it much easier to take out at short notice, in case of trouble: another way in which it is not bolted down.

Hence, we need a theory of how a firm makes its decisions in order to interpret changes in its “capital account” and in the way the balance of payments moves. To develop such a theory we will begin by extracting some implications of the new theories of the firm and then move on to issues of finance.

The Firm as a Substitute for the Market

FDI involves ownership that provides significant control over a firm. A firm is a hierarchical organization, whose existence was pretty much disregarded by neo-classical theory. Why is production organized through firms and what determines their structure? With perfect and complete markets, there are few reasons for factors to meet in a large organization. Workers and capital can just go every day to the market and allocate themselves. A theory of the firm would have to explain why we observe these hierarchical structures we call firms that deal with the market only at their borders: when they buy or sell, not when they produce. ‘Make or buy’ is a question that every firm must face when deciding where to put its borders. Should an apparel company make its own cloth or buy it from another firm? Should it dye, stamp or wash it? Should it make its own yarn? Should it make its own packaging? Should it sell to wholesalers and retailers or own and operate the distribution channels it uses? Should it instead have franchises? Coase (1937) and Williamson (1985) provide an answer to this puzzle. They argue that markets are not perfect and generate transaction costs. Hierarchies are not perfect either and also generate internal transaction or organizational costs. Firms compare the transaction costs of relying on the market with the production and bureaucratic costs of doing things internally. Are suppliers reliable? Do they have monopoly power? Is the internal organization a mess that cannot hold yet another activity? Are there any synergies of having several activities under the same roof?

So why would a foreign firm want to extend its borders internationally through FDI, instead of just relying on the market? In general, given organizational and management costs, *the*

more inefficient the market, the greater the incentive to extend the border of the firm.

The firm will try to internalize all the functions that are poorly carried out by the market. Hence, the firm can be thought of as a substitute for the market. We should not then be surprised to find that when the institutional environment is poor, or when certain markets are not adequately developed, foreign firms may find that in order to do business in another market they need to own and operate a firm, they cannot rely on the market.

This would explain why the total volume of capital flows is positively affected by the quality of a country's institutions and growth prospects, but the share that takes the form of FDI declines with better institutions. The intuition is that the share of FDI needs to be greater in countries with bad institutions because firms will need to substitute for missing markets.

Poor Protection of Intellectual Property

One such example is technology. Enforcing ownership on ideas is extremely difficult. If it were not, firms could simply market their know-how and not have to move into new countries or areas. In the absence of such intellectual property rights protection (IPR), firms may be put in a situation where the only way to profit from their know-how is by expanding towards new markets and countries. In this sense, FDI may be prompted by inadequate property rights protection. You would not give a franchise if you thought that the franchisee would steal your know-how and establish himself independently. You would not even trust a local partner not to set up his own shop once he gets the hang of the business.

The conclusion is that the worse the protection of property rights in general, or IPR in particular, the more likely firms will have to own and operate their own facilities in a market in order, for example, to exploit their know-how. To do so, they would have to put in some FDI and then finance with debt the rest of their operations. Hence, while the poor quality of the institutions of capitalism may make overall investments and capital inflows smaller, it will force more flows to take the form of FDI.

Financial Markets

Finance is another tricky sector. It suffers from time inconsistency because, while a borrower may find it in his benefit to commit to repay in order to get a loan, he may have incentives to keep the money after receiving it. Not knowing what the borrower might do, the lender would be reticent to extend loans or would do so only at higher interest rates. But this could be self-defeating since a higher spread would diminish further the incentives or the ability to pay. To assure the lender of his commitment to repay, the borrower may give as collateral his ownership of some asset. If he fails to repay, the lender is contractually authorized to seize the collateral. This is just one example of how contract enforcement is critical to sustain financial markets. In its absence, a foreign firm may find it advantageous to borrow abroad and transfer the resources to its local company. Hence, FDI can be a way to substitute for missing or inefficient debt markets.

Financial markets also suffer from asymmetric information, which leads to moral hazard. Typically, the firm knows more than (both debt and equity) investors about the nature of the project it plans to embark upon. The firm could inform investors, but it has incentives to misrepresent the truth. The borrower may be truthful, but how is the lender to know? That is why we typically observe more markets for debt than for equity. To lend you just need to believe that you can seize the collateral in case the borrower does not pay. You do not need to know much about the project itself. If instead you are a minority shareholder, you need to know everything about the business, plus you must monitor the manager or the board to make sure they do not pocket your money through the many channels at their disposal.

Under these conditions the question is whether you should “make” your own finance or “buy” it in the market? This is the logic that leads to the conglomerate and the multi-divisional firm: given that they are under the same management structure, problems of asymmetric information can be better addressed and capital allocated internally in a more efficient manner.

Suppose there is a firm in a market where the financial system is lousy and access to international finance is limited, not because there is any problem with the company, but instead because the country has a low credit rating given the high stock of government debt. As they

often argue, these companies see themselves as “the right firm with the wrong address.” Imagine two potential owners: a local entrepreneur and a foreign company. They both value the company at what they perceive to be the net present value of the future cash flow. The local owner internalizes the fact that at different moments in the future he will miss profitable opportunities because access to finance will be restricted or very expensive. These restrictions will be reflected in lower growth projections and/or a high discount rate. By contrast, if the foreign owner does not need to rely on the inefficient domestic market or on the volatile international market for emerging-country debt, he may feel that financial market conditions will not restrict the growth prospects of the firm. He will reflect this by projecting a higher growth of revenues or a lower discount rate when valuing the firm. Under these conditions, it makes sense to expect local capital constrained owners to sell (at a price above their reservation price) to foreign companies with better access to capital (at a price below their reservation price).

Is this what is driving the new spate of mergers and acquisitions (M&A) in the region? Why were the local owners of YPF or Enersis willing to sell to Repsol or Endesa-Spain? What allowed the foreign company to offer a price above the reservation price of the local owners? Was it their superior technology or was it their less constrained financial access?

In this sense, the surge in FDI can be generated by the market’s attempt to find alternatives to poor financial markets for both debt and equity. By making the finance of YPF internal to Repsol and by tapping capital from a different capital-city and with a different balance sheet, the allocation of capital becomes an internal decision of the firm circumventing both the international emerging bond market and the local financial market of Argentina. Repsol-YPF is not funding itself with more equity, but its subsidiary in Argentina may look that way. By the same token, foreign investment may take an increasing role in Mexico given that local firms have not had much access to domestic bank credit. In these cases, FDI is good because it helps overcome poorly functioning financial markets but is not necessarily a sign of an improving domestic environment.

The Logic of Mergers and Acquisitions

This leads us naturally to understanding the nature of mergers and acquisitions (see Krugman 1998). Why do mergers and acquisitions take place? Why are some current owners willing to sell to some potential new owners? The theory of asset pricing gives us some ideas. The price of a share is supposed to equal the net present value of future cash flows. If the cash flows seen by two potential owners are the same or if the rate at which they discount those flows is the same, they will value the asset at the same price and there would be little point in trading them. Hence, if we observe a consistent movement in ownership from one set of owners to another it must be driven by some difference either in the cash flows or in the discount rate. Said differently, owners will sell if they are offered a price above the net present value of the flows they would obtain if they kept the ownership of the company. Hence, in principle, ownership changes hands when the new owners feel they can extract a larger net present value than the current owners can. What can drive this wedge between the two reservation prices?

Obviously, superior technology, management systems or market access will make one owner capable of extracting more value out of a firm than its current owner extracts. This is straightforward and involves the usual attributes associated with FDI. Notice however, that many of the elements that could make FDI superior are not externalities. They can be perfectly appropriated by the firm, or partially captured by the previous owners through a sales price above their reservation price.

In more general terms, the fact that international firms have access to better foreign institutions and markets may be a source of value that can be extracted by purchasing firms in the local market and arbitrage between the markets through the firm. This would be a rationale for some of the mergers and acquisitions taking place in the region. It would also explain why the share of FDI tends to be higher in countries with weaker institutions.

Corporate Finance and the Capital Mix

In analyzing the choice of capital structure, consider the following proposition. Assume a certain volume of capital inflows. Would a larger share of FDI in total flows not be safer? This is obviously the view that a bondholder or a credit rating agency would take. Thus, in its recent

upgrading of Mexico's debt, Moody's used as an argument the fact that the current account was being financed mostly by FDI. Equity owners have claims on the cash flow of an entity that are junior to those of creditors. The larger the share of equity, other things being equal, the less likely it is that the bond will be defaulted on. Hence, as the share of equity increases, *other things being equal*, the less risky the bonds. Hence, it makes sense for bondholders to see as good news the increasing share of FDI in total capital flows. It means their claims are becoming relatively more senior. By the same token, seen from the point of view of the country, the larger the equity share, the greater the risk that is shared with foreign investors.

But other things are not equal and this form of partial equilibrium thinking can be misleading. As the share of equity expands, the debt becomes increasingly safer, and the company will be able to issue it at lower spreads. Modigliani and Miller (1958) showed that under relatively general conditions, the firm would be completely indifferent to its capital structure. The intuition is simple. If a firm has a certain risky stream of cash flow and it divides the rights to it in different forms (say between stocks and bonds), each piece will be priced according to its risk and return characteristics. There is no way to add value to the firm by just adjusting who gets what under which conditions. The total value of the firm is just the net present value of its cash flow, no matter how you split it. By choosing a larger share of equity, more of the revenue and more of the risk will go to equity holders, but that does not change the overall value of the firm. This result breaks down when considerations are introduced such as taxes, costly bankruptcy, problems of asymmetric information and other issues, which will be addressed below.

The relevance of this to our discussion is that we can imagine a country as composed of a representative firm and things that affect the optimal capital structure of the firm will affect the composition of its stock of debt and equity. The flows in the capital account of the balance of payments can be interpreted as being driven by two factors: first, by changes in the desired stocks of debt and equity, and secondly, by its distribution between residents and foreigners. Let us abstract about the second issue and concentrate on the changes to the overall demand of stocks and bonds.

The Modigliani and Miller theorem is often stated to mean that corporate finance does not matter. In our context it would imply that the *composition* of the capital account does not affect the net worth of a country: *national welfare cannot be affected by changing the composition of the different assets and liabilities of the country at market prices*. The composition of international finance does not matter.

Obviously, this is not the case in the real world, but as with many other theoretical results in economics, it raises questions about what aspects of the world might make international finance matter and what effects they might have.

What Makes Finance Relevant?

In this section we use the Modigliani and Miller theorem to consider the factors that affect the composition of the supply of stocks and bonds, abstracting from the elements that create a difference between foreign and domestic investors. We start with tax considerations and then proceed to other issues.

Tax Considerations

One thing that may affect the choice of capital structure is the nature of the tax system. Imagine that interest on bonds is not taxed while income on profits is taxed. This means that by changing the capital structure of the firm you can affect the overall tax burden and hence change the value of the firm that accrues to bond and stock holders. In particular, having maximum debt would lower the tax burden and hence maximize the value of the firm that can be split between stockholder and bondholders. If by contrast, dividends are not taxed while interest is, then it will be optimal to have maximum equity. Normally, it is assumed that because of double taxation of profits (as corporate profits and as personal dividend income), the tax system typically favors debt finance.

This point may be an additional element in explaining why so much of FDI is documented as a loan from the parent company: it can be a way to minimize the tax burden.¹⁰ Since we measure FDI to include loans from the parent company and since such loans are better ways of dodging the taxman than trading stocks and bonds at market prices, this process may be happening within the flows that are normally measured as FDI.

One tax element that has implications for the balance of payments is tariffs and other trade barriers. In principle, other things being equal, they generate an incentive to locate economic activity domestically in order to avoid the tariff. Obviously, it will affect the efficiency of the rest of the economy including the export sector, so the net effect of higher tariffs on output and investment is usually assumed to be negative. Depending on the advantages of foreign ownership in the export or the import-competing sectors it may have ambiguous effects on FDI.

We will not focus much on tax issues in the remainder of this paper. However, the intuition that emerges from this analysis is useful to the study of other considerations. For example, if there are distortions in the markets for debt or equity, these can be assimilated to a tax on those sources of finance and hence lead to a reallocation of the optimal portfolio. Thus, for example, if the debt market is characterized by periods of illiquidity and credit crunches, it is as if a stochastic tax rate had been applied to it, which would lead to a shift of the optimal portfolio away from debt finance. In this sense, if the domestic and foreign debt markets became less efficient after the East Asian and Russian crises, the implicit tax that this imperfection represents must have gone up, causing the optimal portfolio to shift away from debt.

Financial Distress and Costly Bankruptcy

The Modigliani and Miller theorem assumes that in case the firm is unable to pay its bondholders it just does not and the future cash flow of the firm is otherwise unaffected. However, bankruptcies tend to be quite disruptive. They tend to paralyze the firm, cause a problem of

¹⁰ It may also be a way to make sure that in case of capital controls, the firm will have the right to buy foreign

debt overhang, generate uncertainty over property rights, curtail access to additional finance and prevent the company from operating efficiently.

Hence, one reason to choose a particular capital structure is in order to affect the contingent costs associated with financial distress. Debt can be understood as a riskless bond plus a “put” option on the cash flow of the firm: if revenues fall below some level, the firm has the option not to pay the bondholders. A bankruptcy is a situation when the put is “in the money.” One way of thinking about the factors that affect the contingent cost of bankruptcy is by considering the factors that go into the value of the put.

First, obviously is the amount of debt relative to equity, i.e. the structure of its capital. The larger the debt component, the more “in the money” is the put and hence the larger the risk of bankruptcy. Hence, the optimal structure of capital will be moving over time and across firms as they attempt to optimize the contingent cost of bankruptcy relative to other factors.

Secondly, higher expectations of growth in future cash flows lead to a lowering of the probability of default and hence lead to a shift in favor of *more debt*. By the same token, *a reduction in the level of risk of the cash flow also leads to more debt*.

Costly bankruptcy can explain why the share of FDI is higher in countries that are riskier, and have more volatile output. It can also account for the recent increase in the share of FDI in the composition of capital flows to Latin America. The 1998-99 decline in the total volume of capital flows and its shift towards more FDI is consistent with an increase in the perception of risk of the region. It is not a sign of health. By the same token, the radical economic reforms of the early 90s brought with them a rapid rise in total capital flows and a fall in the share of FDI, consistent with the perception of higher growth prospects and lower risks. With the Tequila Crisis in 1995, growth prospects and the perception of risk reversed course and so did the share of FDI, a trend that accelerated with the Asian and Russian crises. Hence, without pretending to have proven anything, this theoretical framework gives a less rosy interpretation of the trends towards a rising share of FDI: a worsening balance between growth prospects and risks!

exchange to service its “external debt.”

Costly bankruptcy can also explain why countries with a large stock of subsoil resources have a larger share of FDI. Mining and oil are sectors characterized by very volatile prices, high capital intensity and very specific assets (i.e. assets that cannot be sold off to another activity in case of financial distress). Therefore, those sectors tend to have a much larger equity composition in their capital mix, and hence a larger share of FDI.

Incomplete Markets and Original Sin

Another dimension of the financial problem is the presence of incomplete markets. Ideally, a firm should be able to borrow short and long term in any currency in order to match the maturity structure of its assets and the currency denomination of its cash flow. If the firm does not find the adequate financial instruments it will have a riskier balance sheet. In particular, if it does not find enough long-term financing to match its assets, it will have to borrow short term and have a maturity mismatch. If it does not find enough financing in the currency denomination of its cash flow, it will have a currency mismatch. These mismatches will make the firm riskier and hence require more equity in its optimal financial mix. From this point of view, since equity is intrinsically very long run, it does not generate maturity mismatch problems. Moreover, since it does not have a currency denomination— i.e. it is just a residual claim over a portion of the firm's cash flow, whatever currency it may be in—it does not generate currency mismatches.

The typical Latin American entity (firm or government) is unable to borrow abroad in pesos and is unable to borrow long term in pesos, even domestically. Hence it must choose between borrowing short-term domestically, thus generating a maturity mismatch, or alternatively borrow longer term in dollars but then be saddled with a currency mismatch.

This phenomenon has been termed *the devil's choice* by Pedro Pou and *the original sin* by others (see Hausmann 1999; Eichengreen and Hausmann; 2000, Hausmann, Stein and Panizza; 2000). Figure 5 shows the proportion of international securities issued in a country's currency relative to the amount issued by that country's residents. Countries such as the United States and Switzerland appear with ratios greater than 1 because many non-residents issue in US dollars or Swiss francs. Countries that do not appear in the graph simply have no

international issues in their own currency. Essentially, all of Latin America and East Asia have either zero or insignificant issues in their own currency.

Following this logic, original sin should lead to smaller overall capital flows and to a larger share of those flows taking the form of FDI. We use as a metric for original sin the variable presented in Figure 5. Hence, a larger value of the index represents a greater ability to borrow in that country's currency. We find in Tables 1, 2 and 3 that *the total volume of capital flows is larger in countries that can borrow in their own currency, while the composition of capital inflows is less intensive in FDI in those countries*. These two effects act in opposite directions and hence there is no significant relationship between this variable and the ratio of FDI to GDP.

Conclusions and policy implications

Capital inflows into Latin America slowed down in 1998-99 but the share of FDI increased very significantly to the point that it now represents over 60 percent of gross flows. Is this good? Is this an indication that things are getting better? Is this a consequence of a general improvement in the perception of growth prospects, stability and institutional development?

This paper revealed that the share of FDI in total flows tends to be larger in countries that are riskier, more distant, resource rich, financially underdeveloped, institutionally weak and suffering from original sin. Hence, it is hard to argue that the rise in the share of FDI is an indication of good health.

However, this does not mean that the rise in FDI is bad in itself. On the contrary, movements in the size and composition of the capital account may reflect behavior that is optimal given the constraints faced by agents. If the risks of operating in Latin America are generating an increase in the optimal share of equity in the capital structure of firms and if M&A is the form it is taking, then it is a movement in the right direction. If the deterioration in the functioning of debt markets is answered by arbitraging between markets through foreign-owned firms, then that is an improvement over the alternatives. If in the absence of adequate institutional development and property rights protection, investment takes the form of FDI, then it is better

that it occur this way rather than not at all. If original sin discourages international lending because it cannot be denominated in local currency, then it is better that it take place as FDI than not at all.

Hence, there is no reason to say that the rise in FDI is not the best thing that could have happened, given the prevailing conditions. However, this does not mean that the rise in FDI is a sign of good health, or that we can rank the quality of a country's institutions, its risks and its prospects according to the share of good cholesterol in total cholesterol. We can argue even less that policies should be adopted to promote FDI and to discourage other types of capital flows. On the contrary, the rise of FDI is an indication that markets are working poorly, that institutions are inadequate and that risks are high. Residents are selling their companies because they do not have the markets and institutions that allow them to grow.

Latin America needs reforms in order to improve the institutional framework that supports investment, finance and risk-taking. It needs to generate a reduction in overall risk by making markets more efficient and complete. This will promote investment, productivity and growth. However, this may well shift the optimal composition towards more debt and less FDI. In that case, a declining share of FDI in the context of rising overall flows may be a sign of good health.

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FIGURE 1. Recent Behavior of Net Commercial Capital Flows in Latin America

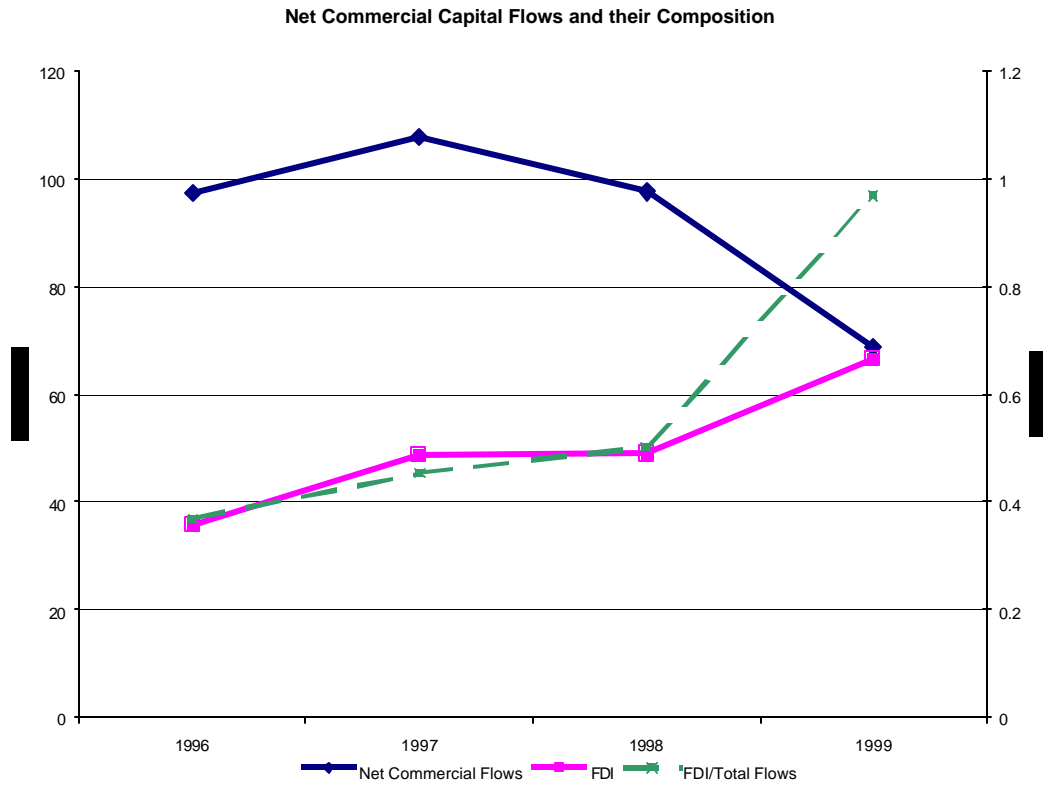


FIGURE 2. Evolution and Composition of FDI Flows in Latin America

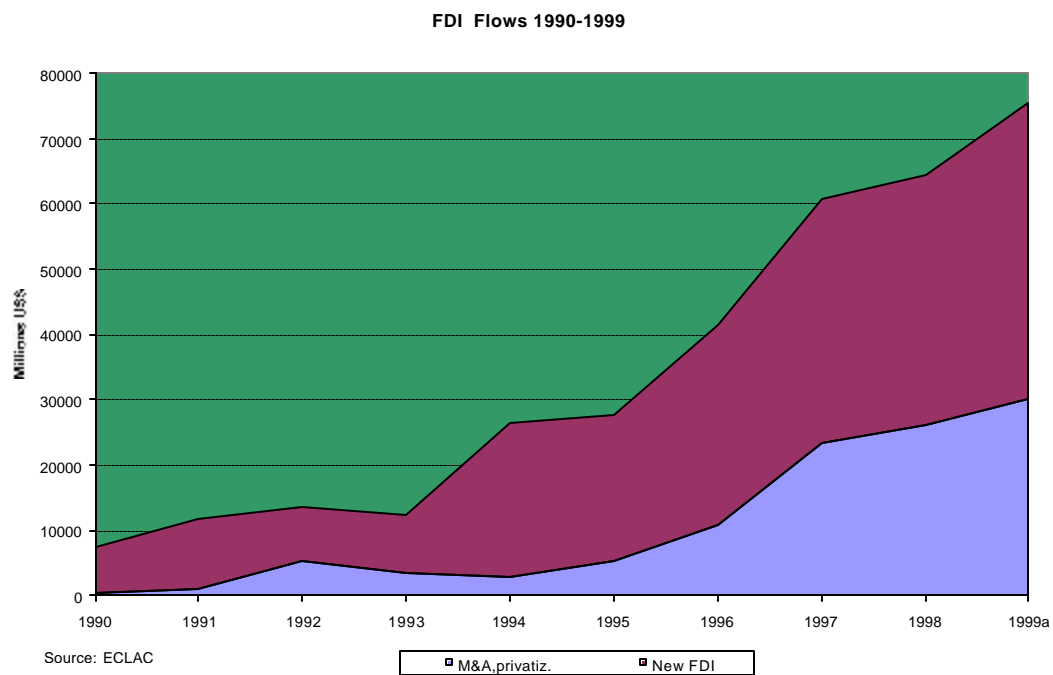
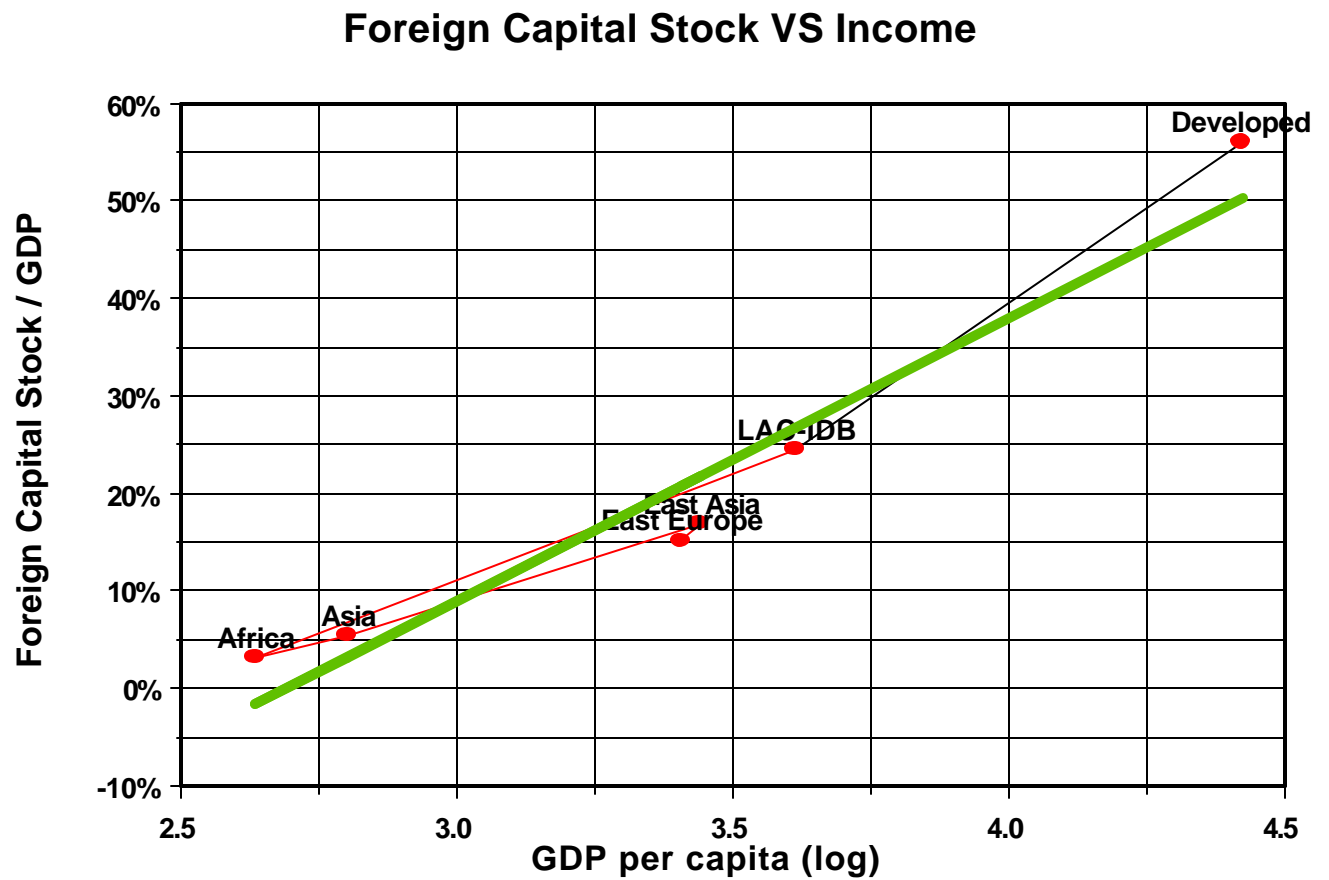


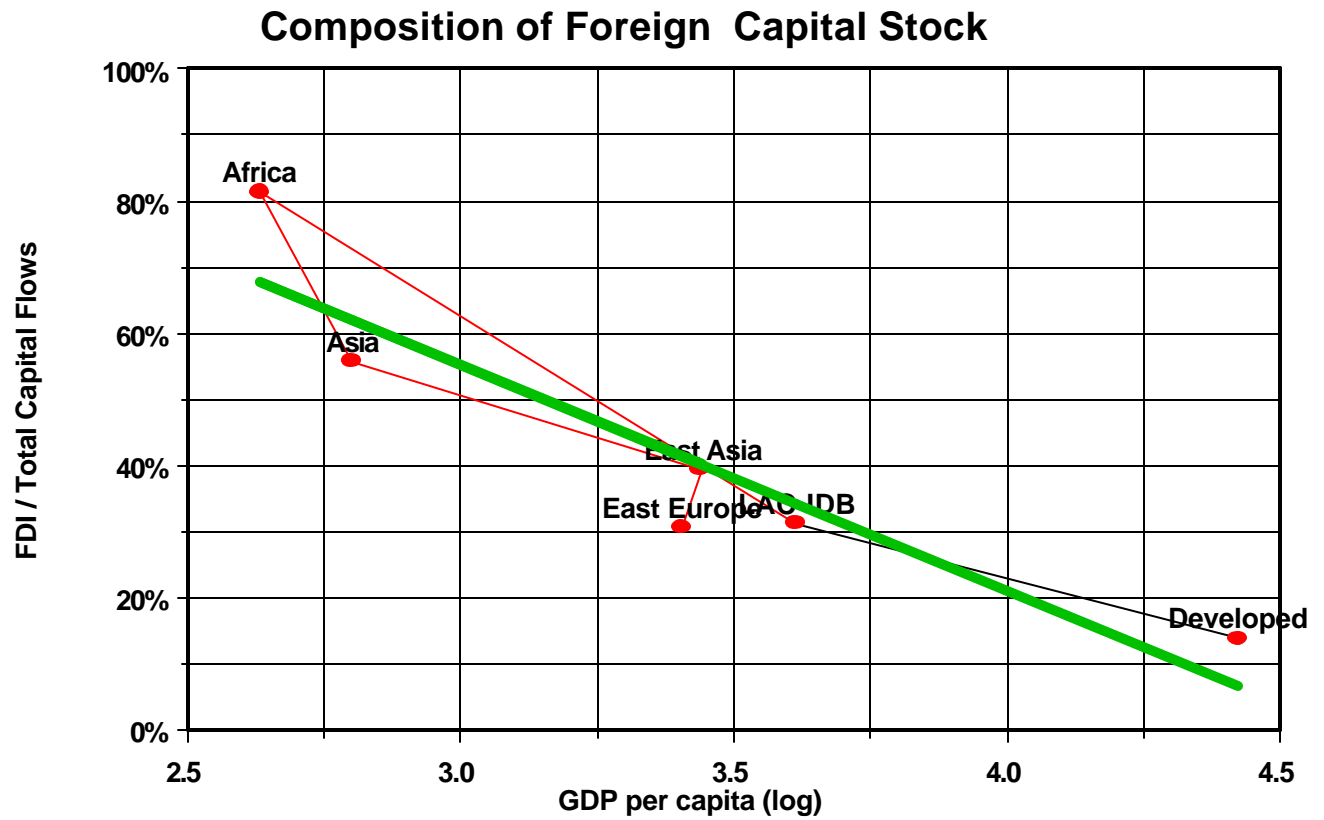
FIGURE 3a. Foreign Capital Stock vs. Income: Regional Comparison



*Data refers to stocks of 1997 in current dollars and GDP in PPP current dollars. The GDP per capita is a weighted average of countries for the same year.

Source: IFS, WB and RES-IDB.

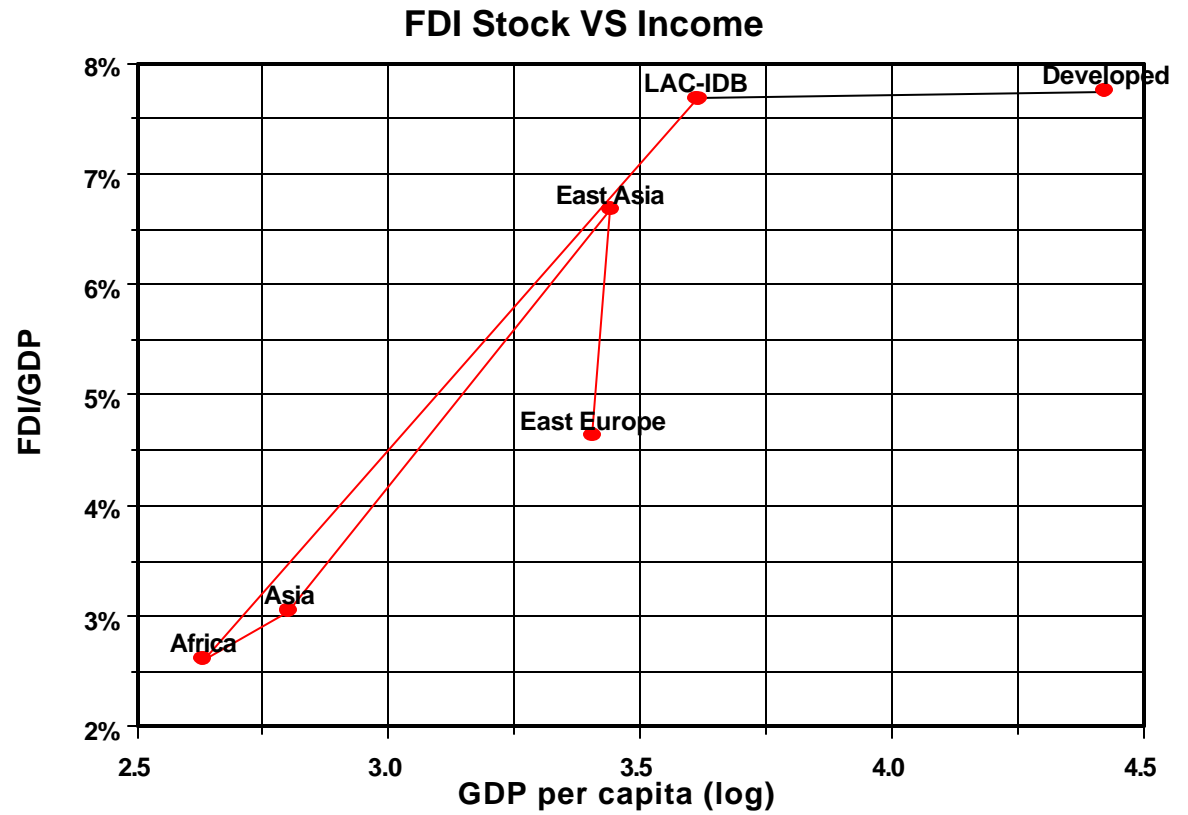
FIGURE 3b. Composition of Foreign Capital Stock vs. Income: Regional Comparison



*Data refers to stocks of 1997 in current dollars and GDP in PPP current dollars. The GDP per capita is a weighted average of countries for the same year.

Source: IFS, WB and RES-IDB.

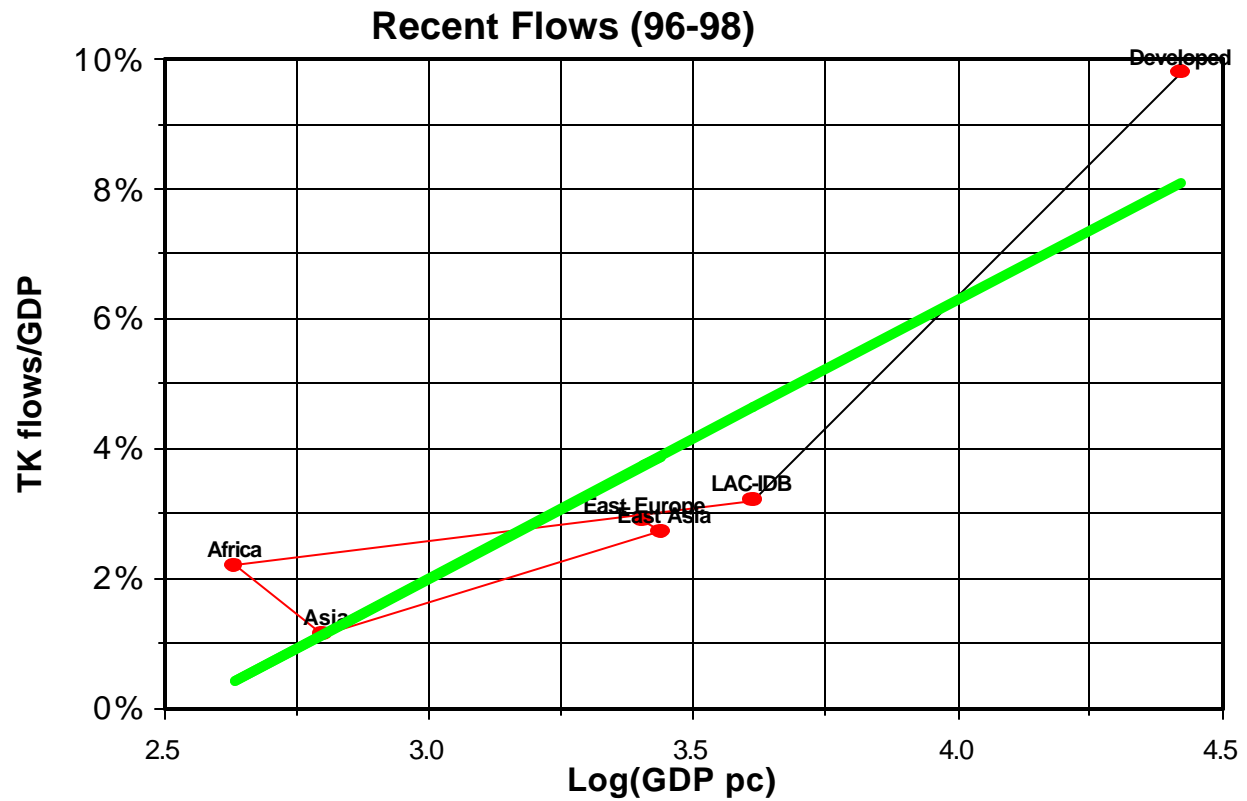
FIGURE 3c. FDI Stock vs. Income: Regional Comparison



*Data refers to stocks of 1997 in current dollars and GDP in PPP current dollars. The GDP per capita is a weighted average of countries for the same year.

Source: IFS, WB and RES-IDB.

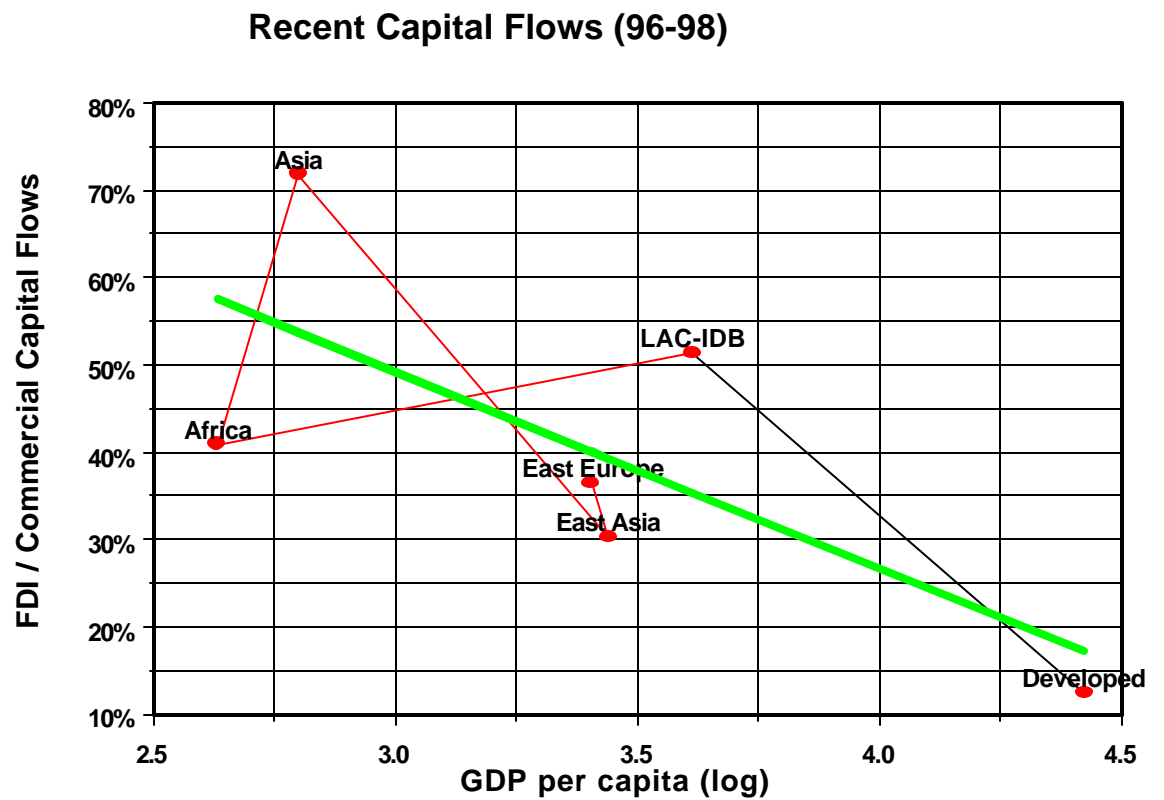
FIGURE 4a. Commercial Capital Flows vs. Income: regional comparison



* Weighted average of countries and simple average of years. The data refers to liability commercial flows in current dollars and GDP in current PPP dollars. The GDP per capita is a weighted average of countries for 1997.

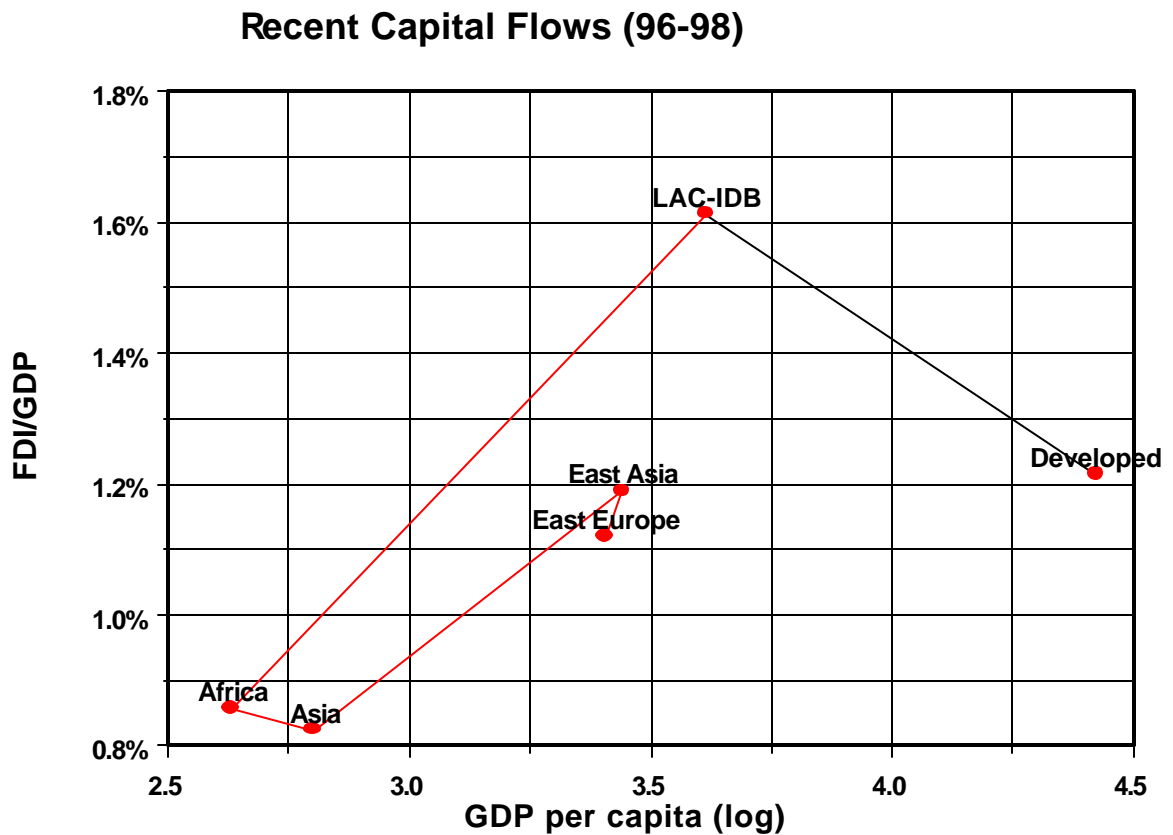
Source: IFS, WEO and RES-IDB.

FIGURE 4b. Composition of Commercial Capital Flows vs. Income: Regional Comparison



* Weighted average of countries and simple average of years. The data refers to liability commercial flows in current dollars and GDP in current PPP dollars. The GDP per capita is a weighted average of countries for 1997.

FIGURE 4c. FDI Flows vs. Income: Regional Comparison

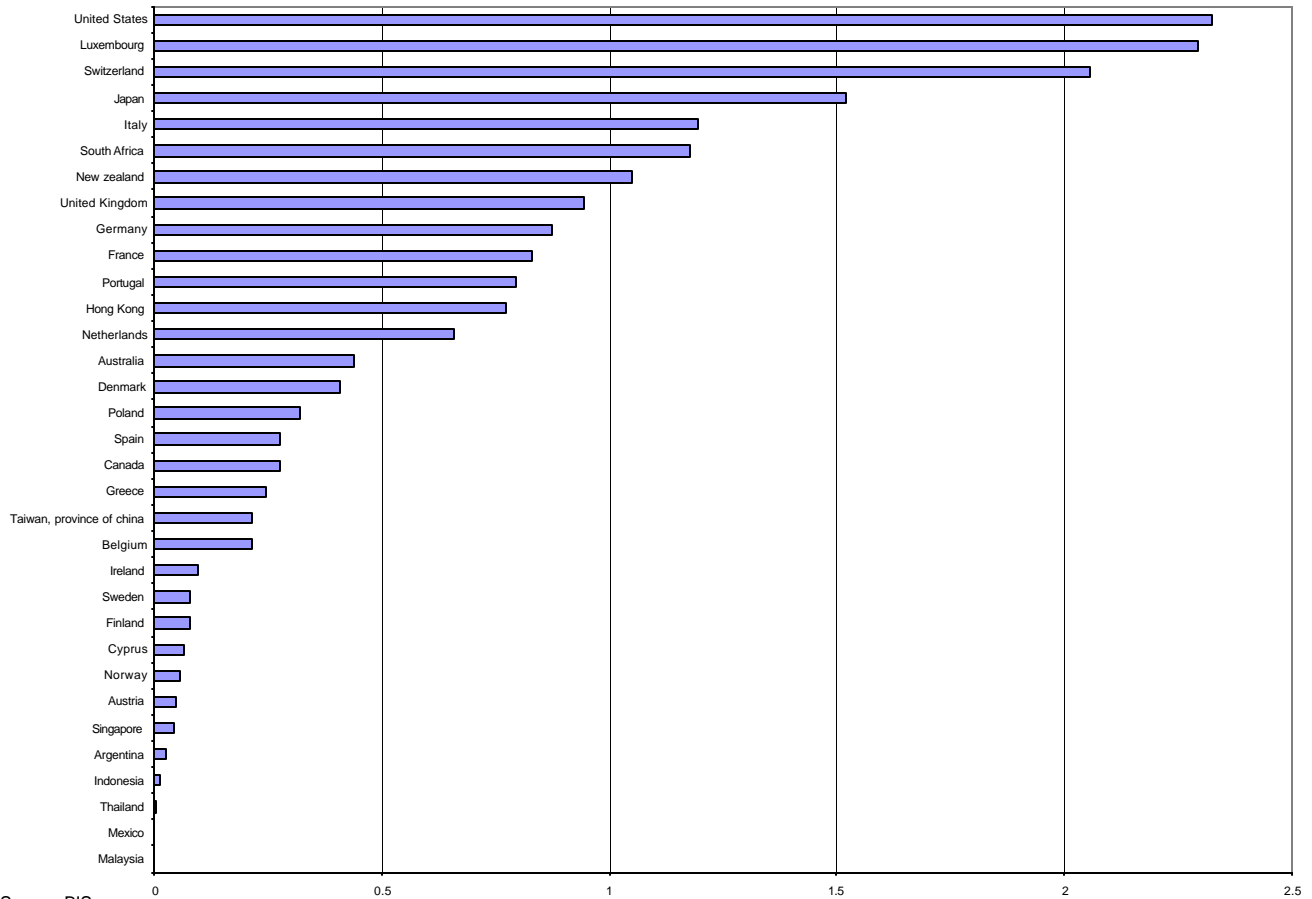


* Weighted average of countries and simple average of years. The data refers to liability commercial flows in current dollars and GDP in current PPP dollars. The GDP per capita is a weighted average of countries for 1997.

Source: IFS, WEO and RES-IDB.

FIGURE 5. Original Sin: World Comparison

Debt in Currency X Over Debt in Country X, 1998 (Money Market Instruments and Bonds)



Source: BIS

TABLE 1

Determinants of Total Commercial Capital Flows/GDP (Average 1996-98)								
Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N. Obs.	Coefficient	t-statistic	R-squared	N. Obs.
Controls								
Income	0.62	8.84	0.57	59	0.52	4.31	0.64	57
Size	0.15	1.82	0.05	59	-0.06	-0.82	0.64	57
Openness	0.92	6.83	0.45	57	0.38	2.29	0.64	57
Stability Indicators								
Country Risk	-0.02	-5.80	0.36	59	0.00	-0.86	0.61	57
GDP volatility (past)	-3.67	-1.06	0.01	58	-1.92	-0.81	0.66	56
Natural Resources								
Subsoil Resources	-0.38	-1.30	0.04	42	-0.16	-0.98	0.74	42
Distance	-0.20	-3.19	0.21	40	-0.04	-0.78	0.70	40
Financial Development								
Private Credit	1.94	4.71	0.30	55	0.58	1.39	0.67	53
Quality of Institutions								
Regulatory Burden	1.34	6.18	0.40	59	0.53	2.19	0.67	57
Accountability	0.81	6.43	0.42	59	0.07	0.38	0.64	57
Government Effectiveness	0.87	7.33	0.48	59	0.14	0.65	0.64	57
Political Instability	0.94	6.48	0.42	59	0.08	0.45	0.64	57
Graft	0.79	7.07	0.47	59	0.05	0.26	0.64	57
Rule of Law	0.83	6.95	0.45	59	0.09	0.48	0.64	57
Principal Component	0.39	8.02	0.53	59	0.09	0.92	0.65	57
Institutions Credit	0.01	0.11	0.00	34	-0.03	-0.37	0.70	34
Institutions Share	0.20	1.54	0.07	35	0.17	2.16	0.72	35
Original Sin	2.41	3.06	0.16	51	0.55	0.80	0.72	49

Notes:

See Annex for an explanation of each variable and of the sample used.

TABLE 2

Determinants of FDI/Total Commercial Capital Flows (Average 1996-98)								
Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N. Obs.	Coefficient	t-statistic	R-squared	N. Obs.
Controls								
Income	-0.083	-4.37	0.25	60	-0.068	-1.96	0.26	57
Size	-0.044	-2.88	0.13	60	-0.019	-0.93	0.26	57
Openness	-0.076	-2.13	0.08	57	0.000	0.00	0.26	57
Stability Indicators								
Country Risk	0.003	3.58	0.18	59	0.000	0.20	0.28	56
GDP volatility (past)	1.126	1.66	0.04	62	0.458	0.65	0.27	56
Natural Resources								
Subsoil Resources	0.180	3.78	0.26	42	0.151	3.65	0.50	42
Distance	0.030	2.22	0.11	40	0.022	1.56	0.34	40
Financial Development								
Private Credit	-0.236	-2.77	0.12	56	-0.075	-0.62	0.24	53
Quality of Institutions								
Regulatory Burden	-0.092	-1.70	0.05	59	0.064	0.87	0.27	57
Accountability	-0.106	-3.54	0.18	60	-0.050	-0.95	0.28	57
Government Effectiveness	-0.102	-3.37	0.16	60	0.011	0.18	0.26	57
Political Instability	-0.095	-2.66	0.11	60	-0.002	-0.04	0.26	57
Graft	-0.091	-3.21	0.15	59	0.015	0.26	0.26	57
Rule of Law	-0.109	-3.78	0.20	60	-0.044	-0.79	0.27	57
Principal Component	-0.044	-3.44	0.17	59	-0.004	-0.14	0.26	57
Institutions Credit	-0.018	-0.80	0.02	34	-0.016	-0.71	0.16	34
Institutions Share	-0.043	-1.59	0.07	35	-0.033	-1.20	0.19	35
Original Sin	-0.511	-2.81	0.14	51	-0.093	-0.36	0.27	49

Notes:

See Annex for an explanation of each variable and of the sample used.

TABLE 3

Determinants of FDI/GDP (Average Flows 1996-98)								
Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N. Obs.	Coefficient	t-statistic	R-squared	N. Obs.
Controls								
Income	0.006	3.63	0.18	64	0.002	1.07	0.40	61
Size	-0.001	-0.98	0.02	64	-0.001	-1.10	0.40	61
Openness	0.012	6.10	0.39	61	0.010	3.21	0.40	61
Stability Indicators								
Country Risk	-0.00016	-3.01	0.11	64	0.000	-0.65	0.40	61
GDP volatility (past)	0.015	0.27	0.00	63	0.021	0.46	0.42	60
Natural Resources								
Subsoil Resources	0.001	0.36	0.00	43	0.003	0.93	0.43	43
Distance	-0.00049	-0.45	0.01	42	0.002	2.07	0.58	42
Financial Development								
Private Credit	0.019	2.72	0.11	60	0.008	0.97	0.43	57
Quality of Institutions								
Regulatory Burden	0.017	4.34	0.23	64	0.013	3.01	0.49	61
Accountability	0.003	1.06	0.01	64	-0.004	-1.42	0.42	61
Government Effectiveness	0.010	4.07	0.21	64	0.010	2.56	0.46	61
Political Instability	0.009	3.15	0.14	64	0.002	0.54	0.40	61
Graft	0.008	3.55	0.17	64	0.006	1.62	0.43	61
Rule of Law	0.009	3.69	0.18	64	0.004	1.01	0.41	61
Principal Component	0.004	3.62	0.17	64	0.003	1.50	0.42	61
Institutions Credit	0.001	0.24	0.00	37	-0.001	-0.34	0.51	37
Institutions Share	0.005	2.13	0.11	38	0.004	2.62	0.59	38
Original Sin	0.007	0.46	0.00	56	0.008	0.48	0.43	53

Notes:

See Annex for an explanation of each variable and of the sample used.

Annex

I. The Sample

All the countries for which information is available excluding the ones with a GDP in current dollars in 1997 smaller than 5 billion, Panama and Switzerland.

II. The Dependent Variables

Variable	Description	Sources
Total Commercial K Flows/GDP* The transformation used is: $\text{Log}(\text{Total Commercial K Flows/GDP})$	Total Commercial K flows = FDI flows liabilities + Portfolio flows liabilities + Other Investments flows liabilities. (all the above in current dollars). Simple Average for 1996-1998. GDP in PPP current dollars. Simple Average for 1996-1998	IFS and World Bank
FDI Flows/ Total Commercial K Flows The transformation used is $\text{Log}((\text{FDI Flows/ Total Commercial K Flows})+1)$	FDI Flows Liabilities in current dollars. Simple Average for 1996-1998. Total Commercial K flows = FDI flows liabilities + Portfolio flows liabilities + Other Investments flows liabilities. (all the above in current dollars). Simple Average for 1996-1998.	IFS and World Bank
FDI Flows/GDP The transformation used is $\text{Log}((\text{FDI Flows/GDP})+1)$	FDI Flows Liabilities in current dollars. Simple Average for 1996-1998. GDP in PPP current dollars. Simple Average for 1996-1998	IFS and World Bank

* We excluded the countries for which the average of Total Commercial K flows < 0 (2 countries) and those for which FDI/Total Commercial K flows > 3 (2 also).

III. The Explanatory variables

Variable	Description	Sources
Income	Log(GDP per capita in current dollars)	WEO
Size	Log(GDP in current dollars)	WEO
Openness	Log (Exports/GDP)	IFS, WEO
Country Risk	The indicator ranks the countries of the world depending on the perception of risk. The higher the riskier.	Institutional Investor
GDP volatility (past)	Standard Deviation of the growth rate of the GDP in constant local currency during the 90's.	WEO
Subsoil Resources	Dollar value of the subsoil resources of the country.	
Distance	Distance to main markets.	Barro and Lee (World Bank)
Private Credit	Private Credit/GDP	IFS
Quality of Institutions indexes - Kaufmann	Aggregate indexes of different measures related to six basic governance concepts. The indexes are higher in the countries of better government performance.	Kaufmann et al.
- Regulatory Burden	Incidence of market-unfriendly policies and perception of the burdens imposed by excessive regulation	Kaufmann et al.
- Accountability	Measures the extent to which citizens of a country are able to participate in the selection of governments.	Kaufmann et al.
- Government Effectiveness	Combine perceptions of the quality of public service provision, the quality of the bureaucracy and the competence of civil servants.	Kaufmann et al.
- Political Instability and Violence	Measure perceptions of the likelihood that the government in the power will be	Kaufmann et al.

	destabilized or overthrown by possibly unconstitutional and/or violent means	
- Graft	Measures perceptions of corruption.	Kaufmann et al.
- Rule of Law	Measure the extent to which agents have confidence in and abide by the rules of society.	Kaufmann et al.
- Principal component of the last six indicators.	A measure that tries to combine all the aspects described by the six indicators.	Kaufmann et al.
Institutions Credit	Indicator of the legal rules covering protection of creditors.	Lopez-de-Silanes et al.
Institutions Share	Indicator of the legal rules covering protection of the corporate shareholders.	Lopez-de-Silanes et al.
Original Sin	Percentage of total external debt of a country that is issued in its own currency.	BIS, RES-IDB

IV. The Models

Two specifications were used to study the determinants of the volume and composition of recent capital flows. The models were estimated using cross section data and Ordinary Least Squares.

In the first one the dependent variables are regressed against each of the independent variables alone and a constant. It explores the raw relation between both variables, without distinguishing the indirect channels through which the effects can take place. It is used to verify if the data validates or not the stylized facts about the behavior of capital flows.

In the second, three controls are always included: income, size and openness. In this way we can aisle the direct effect of the explanatory variable and avoid the possibility that it is acting as a proxy of a more robust variable.

The econometric results are shown in tables 1, 2 and 3.